

Application Serial No. 10/813,369
Client/Matter No. 6270/139

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REMARKS

This is a response to the Office Action dated April 27, 2007. Claims 1-41 are pending in the application.

In the Office Action, the Examiner objects to the specification for various reasons.

Claim 20 is objected to because of informality due to improper grammar.

Claim 30 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

In addition, Claims 1-4, 14-17, 21, 22, 24-27, and 29-31 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,118,269 to Davis ("Davis").

Claims 32, 35, 36, 40, and 41 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,157,721 to Shear et al. ("Shear").

Claims 18 and 28 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis.

Claims 5-13, and 23 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis in view of Shear.

Claim 19 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis in view of U.S. Patent No. 5,978,475 to Schneier et al. ("Schneier").

Claim 20 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis in view of Schneier, and further in view of Shear.

Claims 33, 34, and 37-39 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Shear in view of Davis.

The objections and rejections from the Office Action of April 27, 2007 are discussed below. No new matter has been added. Reconsideration of the application is respectfully requested in light of the following remarks.

I. OBJECTIONS TO THE SPECIFICATION

The Abstract is objected to because of an informality, failing to properly define the term "EM." Applicants have submitted an amended Abstract indicating a change listing "Energy

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Management ('EM')." Accordingly, applicants respectfully request that this objection to the Abstract be withdrawn.

The Specification is objected to because of improper grammar contained in paragraph [0008], missing the term "be" between the terms "may" and "coupled." Applicants have submitted an amended paragraph [0008] indicating a change listing "may be coupled." Accordingly, applicants respectfully request that this objection to the specification be withdrawn.

The Specification is objected to because of an informality, failing to properly define the term "PKI" contained in paragraph [0071]. Applicants have submitted an amended paragraph [0071] indicating a change listing "Public Key Infrastructure." Accordingly, applicants respectfully request that this objection to the specification be withdrawn.

II. OBJECTION TO THE CLAIMS

Claim 20 is objected to because of informalities in which the claim contains improper grammar, requiring an ending "-ing" to the terms "hash" and "encrypt." Applicants have submitted an amended claim 20 indicating change listing "hashing" and "encrypting." Accordingly, applicants respectfully request that this objection to the claim be withdrawn.

III. REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

Claim 30 is rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention. The limitation "said energy distribution network" is rejected as lacking proper antecedent basis. Applicants have submitted an amended claim 30 replacing the terms "energy distribution network" with "energy distribution system," which is supported by sufficient antecedent basis. Accordingly, applicants respectfully request that this rejection to the claim be withdrawn.

IV. REJECTIONS UNDER 35 U.S.C. § 102(b)

A. Rejection to Independent Claim 1

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Independent claim 1 is rejected under 35 U.S.C. § 102(b) as being anticipated by Davis. Applicants submit that claim 1 is patentable over Davis because Davis fails to teach each and every limitation as required by this claim.

Claim 1 relates to “[a]n energy management device for use in an energy management architecture for managing an energy distribution system, said energy management architecture including a network” The energy management device includes, *inter alia*, “a tamper prevention seal coupled with said energy management device, operative to substantially deter unauthorized access to said energy management device and indicate any such access; and a seal tamper detection unit coupled with said processor and said tamper prevention seal and operative to detect when said tamper prevention seal indicates that unauthorized access has occurred.”

Davis is directed to “[a]n electric meter tamper detection system for sensing removal of an electric meter from a corresponding meter socket....” (Davis Abstract). Davis further states “[a]ccording to one embodiment of the utility gateway enclosure according to the present invention, tamper-resistant mechanisms and/or tamper detection mechanisms may be installed with the enclosure.” (see Davis at col. 12, lines 1-18). As the Examiner points out on page 5 of the Office Action, Davis merely discloses “padlocks (not shown) provided on meter rings (not shown)...” to be used as a tamper-resistant mechanism (see Davis at col. 12, lines 4-7) and further discloses “a low-impedance current coil which is connected across the power meter...” to be used as a tamper detection mechanism (see Davis at col. 12, lines 7-24).

Davis does not teach or suggest “a seal tamper detection unit coupled with ... said tamper prevention seal and operative to detect when said tamper prevention seal indicates that unauthorized access has occurred,” as required by applicants’ independent claim 1. Specifically, Davis entirely fails to teach or disclose a coupling between the tamper-resistant mechanism (i.e., the padlock) and the tamper detection mechanism (i.e., the low-impedance current coil). By contrast, Davis states that “tamper-resistant mechanisms *and/or* tamper detection mechanisms may be installed with the enclosure” (Davis at col. 12, lines 2-4; emphasis added), suggesting that the padlocks and low-impedance current coil may be used entirely independent of one another. Even assuming they can be used at the same time, Davis does not teach or suggest that such tamper-resistant mechanisms and tamper detection mechanisms are coupled to each other in any way. Simply stated, Davis does not teach or suggest that its low-impedance current coil is

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coupled in any way to its padlock and operative to detect when its padlock indicates that unauthorized access has occurred, and the Examiner has made no showing to this effect.

Accordingly, since Davis does not teach or suggest "a seal tamper detection unit coupled with ... said tamper prevention seal and operative to detect when said tamper prevention seal indicates that unauthorized access has occurred," Davis neither teaches nor suggests each and every element of independent claim 1. Therefore, applicants respectfully submit that this claim is in condition for allowance.

Dependent claims 2-4, 14-17, 21, 22, 24-27, and 29-31 are also rejected under 35 U.S.C. § 102(b) as being anticipated by Davis. Since dependent claims 2-4, 14-17, 21, 22, 24-27, and 29-31 depend from independent claim 1, they should be allowed for at least the reasons set out above with respect to independent claim 1. Applicants therefore respectfully submit that these claims are in condition for allowance.

B. Rejection to Independent Claims 32 and 41

Independent claims 32 and 41 are rejected under 35 U.S.C. § 102(b) as being anticipated by Shear. Applicants submit that claims 32 and 41 are patentable over Shear because Shear fails to teach all the limitations required by the claims.

Claims 32 and 41 are directed to methods and systems, respectively, for "protecting data created, stored and sent by an energy management device that is protected by a tamper prevention seal operative to substantially deter unauthorized access to said energy management device and indicate any such access." Both claims further require, *inter alia*, "generating said data, said data being characterized by an integrity," and "detecting when said tamper prevention seal indicates that unauthorized access has occurred." Method claim 32 further requires "protecting said integrity of said data in response to said detecting," while system claim 41 requires "means for taking action to protect said integrity of said data."

The Shear patent states that "[t]he present invention provides improved techniques for protecting secure computation and/or execution spaces ... from unauthorized ... load modules or other 'executables' or associated data." (Shear at col. 4, lines 51-56). Load modules 54 are produced by authorized provider 52 and distributed for use by different users. Authorized provider 52 submits load modules 54 to verifying authority 100. Verifying authority 100 analyzes and tests the load modules 54. If a load module 54 passes the test, verifying authority

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100 may affix a digital seal of approval to the load module. Unauthorized provider 64 also knows how to make load modules that look a lot like the load modules produced by authorized load module provider 52. An authorized load module 54d made by unauthorized producer 64 will be able to run on protected processing environments 108. Protected processing environments 108 can use digital seal of approval 106 to distinguish between authorized and unauthorized load modules 54 (*see, e.g.,* Shear at col. 8, lines 17-19; col. 9, lines 3-10, 43-55).

First, Shear does not teach or suggest at least “detecting when said tamper prevention seal indicates that unauthorized access has occurred” as recited in claims 32 and 41. Specifically, Shear does not teach a system or method whereby a tamper prevention seal indicates an unauthorized access. Instead, verifying authority 100 merely analyzes the modules and indicates their authenticities. Verification by verifying authority 100 is *performed before the load modules attempt to access* the protected processing environment 108. Indication of authenticity of load modules before they even attempt to access the protected processing environment 108 is not an indication “that unauthorized access has occurred,” as required by claims 32 and 41.

Further, Shear does not teach or suggest at least “generating said data ... characterized by an integrity” and “protecting said integrity of said data,” as generally required by claims 32 and 41. By contrast, Shear teaches that the *secure computation environment* is protected from *bogus or rouge load modules, executables and other data elements*, which are created outside the secure computation environment. (*see, e.g.,* Shear Abstract). Load modules 54 are produced by authorized provider 52 or unauthorized provider 64. When the load modules 54 or 54d enter the protected processing environment 108, the load modules are tested for their authenticities to protect the protected processing environment against unauthorized load modules. What is protected in Shear is the protected processing environment against unauthorized load modules which are generated outside the protected processing environment, *not the integrity of the data*, as recited in claims 32 and 41.

Accordingly, Shear does not teach each and every element of independent claims 32 and 41. Applicants therefore respectfully submit that these claims are in condition for allowance.

Dependent claims 35, 36, and 40 were also rejected under 35 U.S.C. § 102(b) as being anticipated by Shear. Dependent claims 35, 36, and 40 should be allowed for at least the reasons set out above for independent claim 32. Applicants therefore respectfully submit that these claims are in condition for allowance.

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V. REJECTIONS UNDER 35 U.S.C. § 103(a)

Dependent claims 18 and 28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis. Dependent claims 18 and 28 should be allowed for the reasons set out above for the independent claim 1 as discussed in section IV. Applicants therefore respectfully submit that these claims are in condition for allowance.

Dependent claims 5-13 and 23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis in view of Shear. Dependent claims 5-13 and 23 should be allowed for the reasons set out above for the independent claim 1 as discussed in section IV. Applicants therefore respectfully submit that these claims are in condition for allowance.

Dependent claim 19 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis in view of Schneier. Dependent claim 19 should be allowed for the reasons set out above for the independent claim 1 as discussed in section IV. Applicants therefore respectfully submit that this claim is in condition for allowance.

Dependent claim 20 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Davis in view of Schneier in further view of Shear. Dependent claim 20 should be allowed for the reasons set out above for the independent claim 1 as discussed in section IV. Applicants therefore respectfully submit that this claim is in condition for allowance.

Dependent claims 33, 34, and 37-39 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Shear in view of Davis. Dependent claims 33, 34, and 37-39 should be allowed for the reasons set out above for the independent claim 32 as discussed in section IV. Applicants therefore respectfully submit that these claims are in condition for allowance.

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SUMMARY

Each of the rejections in the Office Action dated April 27, 2007 has been addressed and no new matter has been added. Applicants submit that all of the pending claims 1-41 are in condition for allowance and notice to this effect is respectfully requested. The Examiner is invited to contact the undersigned attorney if such communication would expedite the prosecution of this application.

Respectfully submitted,

Dated: July 26, 2007

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